

peristome moderately expanded, reflected, and thickened. The columella is stout, almost one-fourth the width of the interior of the whorls, and crossed by slender, slightly retractively curved axial ribs.

The type, U.S.N.M. 536886, was collected by Miss M. E. Bourgeois at Presidio, Veracruz. It

has 13 whorls and measures: height, 12 mm; diameter, 5 mm.

The small form and pupoid shape will differentiate this from all other species except possibly *Coelostemma imbricata* von Martens, in which the middle whorls are not cylindric.

ICHTHYOLOGY.—*Two marine fishes new to the fauna of Alaska, with notes on another species.*¹ LEONARD P. SCHULTZ, U. S. National Museum.

Recently in identifying a collection of fishes taken in Alaskan waters by Dr. Waldo L. Schmitt, two of the species proved to be new to the known fauna of Alaska and of North America. Additional information is given on another species.

***Sebastes polyspinis* Taranetz and**

Moiseev

Fig. 1

Sebastes polyspinis Taranetz and Moiseev, in Taranetz, Vestnik dv. Eiliala Akad. Nauk SSSR no. 1-3: 69. 1933; Taranetz, Bull. Pacific Sci. Inst. Fish. Oceanog., 2: 94. 1937.

The discovery of six specimens of *Sebastes* in Schmitt's collection with XIV dorsal spines all belonging to the same species was a surprise, because among the hundreds of specimens of this group examined from the American side of the North Pacific, all have had XIII dorsal spines. From time to time species of *Sebastes* have been reported from the Asiatic side of the North Pacific Ocean with XIV spines, but these specimens are thought to be the first recorded from Alaska. My studies indicate that the Alaskan specimens belong to the species *Sebastes polyspinis*. Although there are some minor differences, such as in color, it is thought best not to describe them as a new form without first making direct comparisons with the types of *S. polyspinis*, which is not now possible because of the war.

The following key was prepared from the available specimens and literature, and by means of it one should be able to identify the North Pacific species of *Sebastes* with XIV

dorsal spines that have a flattish to convex interorbital space.

1a. Tubes in the lateral line 44 or fewer.

2a. Lateral line tubes 35; vertical scale rows from upper edge of gill opening to base of caudal fin about 65; scales above lateral line at base of first soft ray of dorsal 6 and below lateral line at origin of anal 16; mandible scaly; pectoral rays 16, lower 8 unbranched and swollen; anal rays III, 8; dorsal XIV, 13; interorbital a little convex; nasal and preocular spines present; parietal, postocular, and nuchal with weak spine; color reddish, marked with about 5 indefinite dark saddles along the back; peritoneum black; mouth cavity and gill cavities dusky; Japan... *Sebastes owstoni* Jordan and Thompson²

2b. Tubes in lateral line 40; mandible probably naked; pectoral rays 17; anal III, 10; dorsal XIV, 15; interorbital space flat; nasal and parietal spines strong; preocular, supraocular and postocular very weak; tympanic, coronal and nuchal absent; color red, no spots. Southeast coast of Siberia... *Sebastes pavlenkoi* Wales³

1b. Tubes in lateral line 45 or more.

3a. Tubes in lateral line about 63; vertical rows of scales above lateral line about 115; scales above lateral line 11 or 12 and 17 below; pectoral rays 19, 9 lower ones unbranched; anal III, 7; dorsal XIV, 13; gill rakers 12+27; mandible scaly; interorbital convex; nasal spine small but sharp; other cranial spines absent; peritoneum black; color brownish, top of head and upper sides clouded with dusky; lateral line run-

² *Sebastes owstoni* Jordan and Thompson, Mem. Carnegie Mus. 6 (4): 270, pl. 31, fig. 3. 1914; Jordan and Hubbs, Mem. Carnegie Mus. 10(2): 260, 1925; SCHMIDT, P. J., Trans. Pacific Committee Acad. Sci. USSR 2: 94. 1931.

³ *Sebastes ruber* Pavlenko, Fishes Peter the Great Bay, Trd. Obsc. Test. Kanzani, p. 42. 1910 (name preoccupied); *Sebastes pavlenkoi* Wales, Copeia, No. 1, p. 10. 1930 (new name).

¹ Published by permission of Secretary of the Smithsonian Institution. Received September 5, 1942.

ning in a conspicuous light streak; upper part of opercles with a black spot. Japan . . . *Sebastodes itinus* Jordan and Starks⁴

- 3b. Tubes in lateral line 45 to 50; vertical scale rows 85 to 100; gill rakers on first gill arch 10 to 12+26 or 27; peritoneum black; interorbital convex; nasal spines small but sharp; other cranial spines absent.

- 4a. Mandible naked; vertical scale rows about 100 (these data based on a specimen, U.S.N.M. no. 102454, from Okhotsk Sea); pectoral rays 19, lower 10 or 11 unbranched; anal rays III, 8; dorsal rays XIV, 17; gill rakers about 10+26; black streak along maxillary; one below eye, then a white streak, then a broad blotch behind eye; two blotches on opercle; an indistinct blotch or bar below spiny dorsal and another below soft dorsal. Asiatic side Bering Sea . . . *Sebastodes glaucus* (Hilgendorf)⁵

- 4b. Mandible scaly; vertical rows 88 to 91; pectoral rays 18, lower 8 or 9 unbranched; anal rays III, 7 or 8; dorsal XIV, 14 or 15; lips of lower jaw dusky; a blackish streak along lower part of maxillary; another oblique black streak from under eye across preopercle, a pale one above and behind eye dusky; opercle with 2 dusky blotches; upper median fins dusky; body above more or less coarsely reticulated or marbled with dusky; mouth and gill cavities with traces of dusky shades here and there; base of pectoral with dusky area; trace of a wide pale band along upper sides and another along lower sides, both probably reddish in life. Bering Sea; Shumagin and Aleutian Islands . . . *Sebastodes polyspinis* Taranetz and Moiseev

Since the publication by Taranetz (1933: 69-70) is mostly in Russian, I give below a

translation (made for me) of the description of *S. polyspinis*:

"Description of our specimens: D XIV (XIII), 13-15; A III, 7-8; gill rakers on the outside surface of first arch 9-12+23-26; P 18 (4 fish); tubes in lateral line 48-50 (57?); 28 vertebrae (4 fish) with urostyle.

"The body is covered with ctenoid scales; accessory scales are missing; the head, except the gill membranes, is covered with very small scales; the smallest are situated on the upper and lower jaws on the brachistegal rays, and on the front of the head; ridges on the head are not developed except the parietals; on the operculum there are 2 sharp spines: on the preoperculum there are blunt spines, two or three of them are split at the ends; nasal spines hidden in the skin: base of skull curved; parietals not connected; interorbital space is convex; lower jaw protrudes forward and has a strong knob on the symphysis.

"The next to the last dorsal spine extends half way out along the last; the second anal spine is shorter and thicker than the third one.

"Color in formalin: Sides of body are dark without spots; the dorsal part is darker; the ventral side pale; the edges of the first dorsal black; peritoneum black; other fish vary from pale to brown with black spots.

"D. XIV, 13; A III, 8; P. 18; gill rakers 12+26; lateral line tubes 48-50. The length of the head is 107 mm. The length of the body 360 (?); without caudal 305; diameter of eye 21.0; diameter of orbit 25.5; interorbital space 23.1; upper jaw 47.2; lower jaw 59.0; height of the head 88.3; length of the longest gill raker 14.7; maximum height of the body 110.5; minimum 25.9; length of pectoral (from the upper edge of the base to the end of longest ray when the fin is folded against the body) 80.7; base of pectoral 29.0; length of pelvic 62.2; length of base of pelvic 35.9; length of base of first dorsal 111.5; second dorsal 59.7; length of base of anal 42.9; height of longest dorsal spine (fifth) 33.4; height of 13th spine 16.1; of 14th 24.8; length of second anal spine 29.6; length of third anal spine 29.8

"From other species *S. pavlenkoi* Wales (= *S. ruber* Pavlenko) differs by the number of pores in lateral line, by the absence of spines on the upper part of the head, and in other details. No other type of *Sebastodes* has 14 dorsal

⁴ *Sebastodes itinus* Jordan and Starks, Proc. U. S. Nat. Mus. 27: 99, fig. 1, 1904. Fig. 1 has but XIII dorsal spines, but Dr. G. S. Myers informs me that the type has XIV dorsal spines, and there are 63 lateral-line tubes instead of 54 as published.

⁵ *Sebastes glaucus* Hilgendorf, S. B. Ges. Naturf. Freunde, p. 170. 1880. Although I have not been able to locate the specimen from Bering Island reported upon as *S. glaucus* (by Jordan and Gilbert, Rept. U. S. Fur Seal Comm., pt. 3: 447. 1898; Jordan and Evermann, U. S. Nat. Mus. Bull. 47, pt. 2: 1777, 1898; and Jordan and Starks, Proc. U. S. Nat. Mus. 27: 97. 1904), it probably is not this species but *Sebastodes polyspinis* Taranetz and Moiseev.

spines except *S. glaucus* to which ours is not related. Our fish differs from *S. jordani*, *S. goodei*, *S. paucispinis* by the presence of 14 spines in the first dorsal and in the number of pores in the lateral line.

"A fish referred to by P. J. Schmidt as *S. ciliatus* (*S. taczanowskii* according to Soldatov and Lindberg, p. 156, not *S. ciliatus* Tilesius) appears to be the same, but because of slight variations in formulae we can not affirm it conclusively as P. J. Schmidt does not check on it further.

"Distribution: from about Pribilof Islands to east coast of Kamchatka."

The data presented in Tables 1 and 2 form the basis for the identification of the Alaskan specimens as *S. polyspinis*, which were collected as follows:

U.S.N.M. no. 119375. Alaska: 22 miles ENE. Castle Rock, off Big Koniuij Island (Shumagin Islands), trawl, 95-120 fathoms, October 2, 1940, 1 specimen, 208 mm.

U.S.N.M. no. 119379. Alaska: Pavlof Bay, trawl, 10-30 fathoms, September 25, 1940, 1 specimen, 117 mm.

U.S.N.M. no. 19376. Alaska: King Cove, trawl, 15-22 fathoms, October 16, 1940, 2 specimens, 189 and 144 mm.

U.S.N.M. no. 119378. Alaska: Castle Bay, trawl, 45-60 fathoms, October 29, 1940, 1 specimen, 153 mm.

U.S.N.M. no. 119377. Alaska: Olga Bay, trawl, 38-95 fathoms, November 4, 1940, 1 specimen, 145 mm.

TABLE 1.—COUNTS AND MEASUREMENTS OF SEBASTODES POLYSPINIS TARANETZ AND MOISEEV. (All measurements expressed in hundredths of the standard length.)

Characters	Types from Bering Sea	Alaskan Specimens	
Dorsal spines.....	XIV	XIV	XIV
Dorsal soft rays.....	13-15	14	15
Anal rays.....	III, 7-8	III, 7	III, 8
Gill rakers first arch.....	9 to 12 + 23 to 26	12+27	11+26
Pectoral rays.....	18	18-18	18
Unbranched lower pectoral rays.....	—	9-9	8
Tubes lateral line.....	48-50	50	48
Vertical scale rows.....	—	91	85
Scales above lateral line.....	—	11	10
Scales below lateral line.....	—	17	16
Standard length in millimeters..	305	208	117
Diameter of orbit.....	8.38	9.62	9.4
Interorbital space.....	7.01	7.69	7.7
Length of maxillaries of upper jaw	15.4	15.4	15.6
Length of lower jaw.....	19.4	17.8	17.5
Longest gill raker.....	4.82	5.05	5.12
Depth (greatest).....	36.2	32.7	34.7
Least depth caudal peduncle....	8.46	9.13	9.4
Length of pectoral fin.....	26.4	27.2	28.6
Length of pelvic fin.....	20.4	20.9	20.1
Length of base first dorsal.....	36.7	37.5	37.6
Length of base second dorsal....	19.6	20.7	22.6
Length of base of anal.....	14.2	15.8	15.4
Length of longest dorsal spine (5th).....	10.9	12.5	12.8
Length of thirteenth dorsal spine.	5.28	7.21	8.53
Length of fourteenth dorsal spine	8.16	10.1	12.8
Length of second anal spine.....	9.68	11.1	12.8
Length of third anal spine.....	9.78	11.5	14.1
Length of head.....	—	33.2	34.2
Preorbital width.....	—	1.68	1.88
Length of caudal peduncle.....	—	20.9	23.1
Postorbital length of head.....	—	15.6	16.2

TABLE 2.—COUNTS RECORDED FOR CERTAIN SPECIES OF SEBASTODES WITH XIV DORSAL SPINES

Species	Fin rays													Lower unbranched pectoral rays			
	Soft dorsal					Soft anal				Pectoral							
	13	14	15	16	17	7	8	9	10	16	17	18	19	8	9	10	11
<i>polyspinis</i> ...	1	5	1	—	—	3	4	—	—	—	—	7	—	1	6	—	—
<i>glaucus</i>	—	—	—	—	1	—	1	—	—	—	—	—	2	—	—	1	1
<i>itinis</i>	1	—	—	—	—	1	—	—	—	—	—	—	1	—	1	—	—
<i>owstoni</i>	1	—	—	—	—	—	1	—	—	1	—	—	—	1	—	—	—
<i>pavlenkoi</i>	—	—	1	—	—	—	—	—	1	—	1	—	—	—	—	—	—

Species	Number of gill rakers on first gill arch															
	Above angle			Below angle		Total gill rakers				Pore in lateral line						
	10	11	12	26	27	36	37	38	39	35-37	38-40	41-43	44-47	48-50	51-53	54-57
<i>polyspinis</i> ...	3	2	2	5	2	2	3	1	1	—	—	—	4	3	—	—
<i>glaucus</i>	1	—	—	1	—	1	—	—	—	—	—	—	1	—	—	—
<i>itinis</i>	—	—	1	—	1	—	—	—	1	—	—	—	—	—	—	—
<i>owstoni</i>	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
<i>pavlenkoi</i>	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—

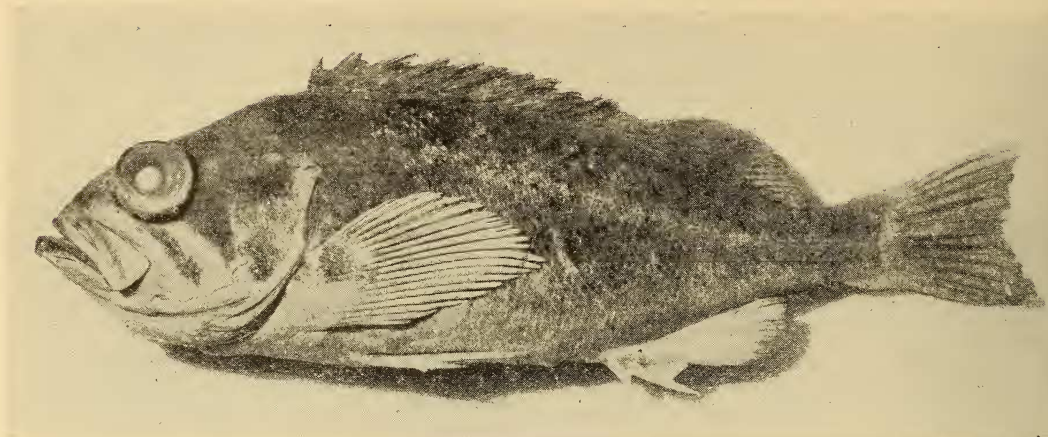


Fig. 1.—*Sebastodes polyspinis* Taranetz and Moiseev. Photograph of an Alaskan specimen.

Eurymen gyrinus Gilbert and Burke

Eurymen gyrinus Gilbert and Burke, Bull. U. S. Bur. Fish. 30: 64. 1912 (type, U.S.N.M. no. 74377, from Avatcha Bay, east coast Kamchatka); Schmidt, P. J., Compt. Rend. (Doklady) Acad. Sci. URSS 15(5): 279–280. 1937 (see this paper for synonyms and literature).

Since the two specimens reported here are probably the first published record of the occurrence of this species on the American side of the North Pacific Ocean, I record in Table 3 data from them.

U.S.N.M. no. 119387, taken in Canoe Bay, Alaska, September 19–21, 1940, in a gill net at 30–40 fathoms by Dr. W. L. Schmitt.

Triglops metopias Gilbert and Burke

Triglops metopias Gilbert and Burke, Bull. U. S. Bur. Fish. 30: 50, fig. 8. 1912; Soldatov and Lindberg, Bull. Pacific Sci. Fish. Inst. 5: 195. 1930; Taranetz, Bull. Pacific Sci. Inst. Fish. Oceanogr. 11: 109, 110. 1937; Andriashev, Explor. Mers URSS, Instit. Hydrolog. Leningrad, fasc. 25: 303, 1937.

Because this species is rare and seldom reported, it was thought best to give here a brief description.

U.S.N.M. no. 119438, one specimen taken in Canoe Bay, Alaska, November 4, 1940, by Dr. W. L. Schmitt.

The following measurements in millimeters were made on a specimen from Canoe Bay, Alaska, collected by Dr. W. L. Schmitt, November 4, 1940: Standard length 107; head

TABLE 3.—COUNTS AND MEASUREMENTS ON TWO SPECIMENS OF EURYMEN GYRINUS. (Measurements expressed in hundredths of the standard length.)

Character	Specimen	
	1	2
Standard length.....	131	140
Head length.....	42.0	45.4
Fleshy interorbital.....	9.93	11.1
Diameter of eye.....	7.64	7.15
Length of snout.....	9.55	11.1
Postorbital length of head.....	24.4	26.8
Length of upper jaw.....	19.8	20.7
Greatest depth.....	29.8	32.1
Least depth.....	6.64	7.15
Length of caudal peduncle.....	8.24	9.86
Longest ray pectoral.....	26.0	26.1
Longest ray caudal.....	23.7	22.8
Length base dorsal.....	60.0	57.5
Length base anal.....	29.6	33.5
Dorsal rays.....	31	30
Anal.....	16	16
Pectoral.....	24	24
Gill rakers first arch.....	0+8	0+9

32.5; snout 11.1; eye 9.1; interorbital space 3.0 postorbital length of head 12.5; greatest depth of body 15.2; least depth of caudal peduncle 3.8; length of caudal peduncle 15.5; maxillaries (tip of snout to rear of maxillary) 15.0; length of longest (sixth) dorsal spine 12.2; longest soft dorsal ray 12.8; longest anal ray 11.0; longest caudal fin ray 18.5; shortest (middle) caudal fin ray 12.8; longest pectoral fin ray 26.2; longest pelvic ray 15.2; length of base of soft dorsal 44.5; length of base of anal fin 43.5; snout to origin of first dorsal 29.7.

The following counts were made: Dorsal X, 26; anal 24; pectoral 20; plates in lateral line 51; gill rakers 0+7.